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## CLAIMS

[Utility model registration claim]

[Claim 1] It is the car navigation with diopter accommodation for presbyopias which is made to unite with a monitor body the Fresnel lens which moves forward and backward, can double with a presbyopia amendment diopter, can elongate and fix a Fresnel lens to a suitable location with a vibrator motor and the three-step type automatic expansion device using a gear, and can be further contracted in a monitor body.

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#### DETAILED DESCRIPTION

[Detailed explanation of a design]

[0001]

[The technical field to which a design belongs]

It is related with the car navigation for presbyopias.

[0002]

[Description of the Prior Art]

It is miniaturized increasingly and the conventional car navigation has become a fine thing also with the small alphabetic character and drawing. And bifocal glasses had to be covered, in order to check the information while the man of a presbyopia operates. However, in operation as which momentary decision is required, the use technique of bifocal glasses was troublesome and far from safety or the amenity.

[0003]

[Problem(s) to be Solved by the Device]

Then, realize car navigation with diopter accommodation for presbyopias which can choose that the man of a presbyopia makes easy to read information on the fine alphabetic character displayed on the liquid crystal screen of car navigation, without using bifocal glasses, and drawing, and the suitable thing which suited each one of presbyopia amendment diopters further.

[0004]

[Means for Solving the Problem]

In order that this design may make easy to read information on the fine alphabetic character displayed on the liquid crystal screen of car navigation, without the man of a presbyopia using bifocal glasses, and drawing, The location which set the Fresnel lens for presbyopias which the liquid crystal screen monitor was made to unify by each one of diopters with the vibrator motor and the three-step type automatic expansion device by the gear is made to carry out advance migration. And it enables it to fix, and it can contract in a liquid crystal display monitor, it has after use, and the safety and the amenity under operation are planned.

[0005]

[The gestalt of implementation of a design]

The power switch of 6 of 5 monitor body of drawing 1 is turned ON. Next, if 1 zoom switch (+) is pushed, while pushing, 9 vibrator motor of drawing 3 rotates, ten gears A and the 11 gear B are operated from the crankshaft of 12, and the three-step expanding rod of 7 is lengthened. This three-step expanding rod is being fixed to the four corners of 3 Fresnel lens frames with linkage nature so that it may not blur in vibration of a vehicle. When four Fresnel lenses move before to the location which looks the best in the alphabetic character and drawing on a 8 in all liquid crystal screen at the amendment diopter of the driver of a presbyopia, it stops pushing a zoom switch. Then, a Fresnel lens frame is fixed. When repeating fine tuning of diopter accommodation, a suitable location is determined pushing a zoom switch (+) and 2 zoom switch (-) by turns. In addition, since, as for a three-step expanding rod, the 1st step of die length makes the dimension of the depth of a monitor body a standard and expanding [ the

3rd step of ] rod is plotted in the 2rd step and the 2rd step in the 1st step, the maximum expanding can be secured to depth 4 times the die length of a monitor body.

It will interlock, if a power switch is turned off in order to stop use of car navigation, and automatically, a three-step expanding rod is settled into a monitor body, and 13 rubber is prepared in the four corners of a Fresnel lens frame so that a liquid crystal screen and a Fresnel lens may not contact directly. [0006]

[Effect of the Device]

Even if the man of a presbyopia did not use bifocal glasses irrespective of the diopter of slight or reinforcement, car navigation could be utilized, and the safety under operation improved by leaps and bounds not to mention the amenity under operation.

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## **TECHNICAL FIELD**

[The technical field to which a design belongs] It is related with the car navigation for presbyopias.

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## PRIOR ART

[Description of the Prior Art]

It is miniaturized increasingly and the conventional car navigation has become a fine thing also with the small alphabetic character and drawing. And bifocal glasses had to be covered, in order to check the information while the man of a presbyopia operates. However, in operation as which momentary decision is required, the use technique of bifocal glasses was troublesome and far from safety or the amenity.

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## EFFECT OF THE INVENTION

## [Effect of the Device]

Even if the man of a presbyopia did not use bifocal glasses irrespective of the diopter of slight or reinforcement, car navigation could be utilized, and the safety under operation improved by leaps and bounds not to mention the amenity under operation.

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## **TECHNICAL PROBLEM**

[Problem(s) to be Solved by the Device]

Then, realize car navigation with diopter accommodation for presbyopias which can choose that the man of a presbyopia makes easy to read information on the fine alphabetic character displayed on the liquid crystal screen of car navigation, without using bifocal glasses, and drawing, and the suitable thing which suited each one of presbyopia amendment diopters further.

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#### **MEANS**

[Means for Solving the Problem]

In order that this design may make easy to read information on the fine alphabetic character displayed on the liquid crystal screen of car navigation, without the man of a presbyopia using bifocal glasses, and drawing, The location which set the Fresnel lens for presbyopias which the liquid crystal screen monitor was made to unify by each one of diopters with the vibrator motor and the three-step type automatic expansion device by the gear is made to carry out advance migration. And it enables it to fix, and it can contract in a liquid crystal display monitor, it has after use, and the safety and the amenity under operation are planned.

[0005]

[The gestalt of implementation of a design]

The power switch of 6 of 5 monitor body of drawing 1 is turned ON. Next, if 1 zoom switch (+) is pushed, while pushing, 9 vibrator motor of drawing 3 rotates, ten gears A and the 11 gear B are operated from the crankshaft of 12, and the three-step expanding rod of 7 is lengthened. This three-step expanding rod is being fixed to the four corners of 3 Fresnel lens frames with linkage nature so that it may not blur in vibration of a vehicle. When four Fresnel lenses move before to the location which looks the best in the alphabetic character and drawing on a 8 in all liquid crystal screen at the amendment diopter of the driver of a presbyopia, it stops pushing a zoom switch. Then, a Fresnel lens frame is fixed. When repeating fine tuning of diopter accommodation, a suitable location is determined pushing a zoom switch (+) and 2 zoom switch (-) by turns. In addition, since, as for a three-step expanding rod, the 1st step of die length makes the dimension of the depth of a monitor body a standard and expanding [ the 3rd step of ] rod is plotted in the 2nd step and the 2nd step in the 1st step, the maximum expanding can be secured to depth 4 times the die length of a monitor body.

It will interlock, if a power switch is turned off in order to stop use of car navigation, and automatically, a three-step expanding rod is settled into a monitor body, and 13 rubber is prepared in the four corners of a Fresnel lens frame so that a liquid crystal screen and a Fresnel lens may not contact directly.

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## **DESCRIPTION OF DRAWINGS**

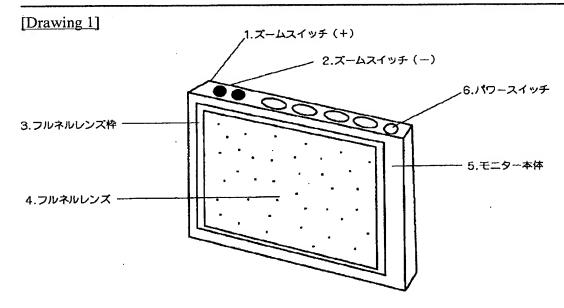
[Brief Description of the Drawings]

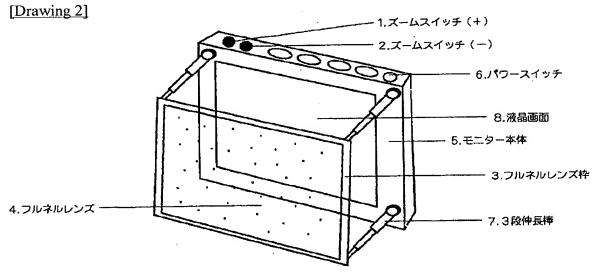
- [Drawing 1] They are the monitor of car navigation, and the perspective view of a Fresnel lens.
- [Drawing 2] It is a perspective view when car navigation and a Fresnel lens are elongated by max.
- [Drawing 3] It is the internal plot plan of a Fresnel lens and a monitor body.

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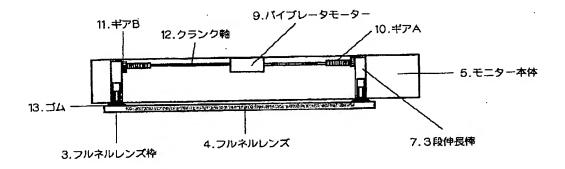
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## **DRAWINGS**





[Drawing 3]



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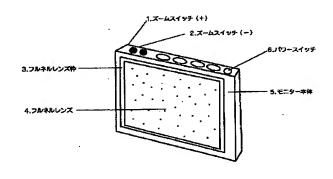
3階

## (54) 【考案の名称】 老眼用視度調節付カーナビゲーション

## (57)【要約】

【課題】老眼の人が遠近両用眼鏡を使用せずにカーナビゲーションの液晶画面に表示される細かな文字及び図の情報を読みやすくすること、さらに各自の老眼補正視度にあった適切なものが選択できる老眼用視度調節付カーナビゲーションを実現する事。

【解決手段】本考案は、軽度及び強度の如何を問わず、 老眼の人が遠近両用眼鏡を使用せずにカーナビゲーションの液晶画面に表示される細かな文字及び図の情報を読みやすくするため、液晶画面モニターに一体化させた老 眼用フレネルレンズをモーターとギアによる3段式自動伸縮装置によって各自の視度に合わせた位置に前進移動させ、且つ固定できるようにし、また使用後は液晶モニターの中に収縮できるもので、もって運転中の安全性及び快適性を図ったものである。



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## 【実用新案登録請求の範囲】

【請求項1】バイブレータモーターとギアを利用した3 段式自動伸縮装置によって前後に移動するフレネルレン ズをモニター本体に一体化させ、老眼補正視度に合わせ て適切な位置にフレネルレンズを伸長及び固定出来るも ので、さらにモニター本体内に収縮する事が出来る老眼 用視度調節付カーナビゲーションである。

## \*【図面の簡単な説明】

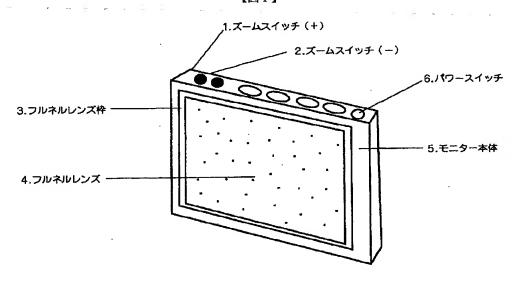
【図1】カーナビゲーションのモニターとフレネルレンズの斜視図である。

2

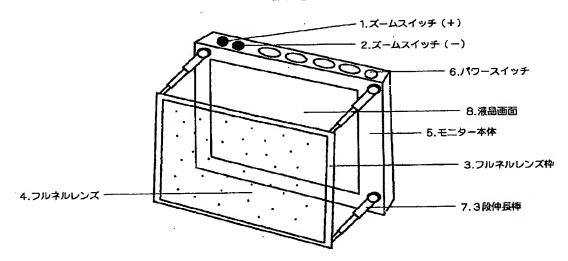
【図2】カーナビゲーションとフレネルレンズが最大に 伸長されたときの斜視図である。

【図3】 フレネルレンズとモニター本体の内部配置図である。

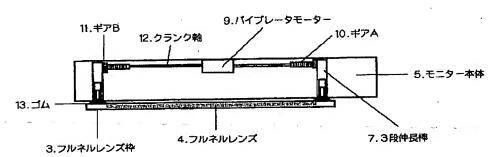
【図1】



【図2】



## 【図3】



## 【考案の詳細な説明】

## [0001]

. . .

## 【考案の属する技術分野】

老眼用カーナビゲーションに関するものである。

## [0002]

## 【従来の技術】

従来のカーナビゲーションは,益々小型化され、その文字及び図も小さく細かなものになっている。そして、老眼の人が運転中にその情報を確認する為には,遠 近両用眼鏡をかけなければならなかった。しかし、瞬時の判断が要求される運転 中では遠近両用眼鏡の使用テクニックが煩わしく、安全性や快適性からは程遠い ものであった。

## [0003]

## 【考案が解決しようとする課題】

そこで、老眼の人が遠近両用眼鏡を使用せずにカーナビゲーションの液晶画面に 表示される細かな文字及び図の情報を読みやすくすること、さらに各自の老眼補 正視度にあった適切なものが選択できる老眼用視度調節付カーナビゲーションを 実現する事。

## [0004]

## 【課題を解決するための手段】

本考案は、老眼の人が遠近両用眼鏡を使用せずにカーナビゲーションの液晶画面に表示される細かな文字及び図の情報を読みやすくするため、液晶画面モニターに一体化させた老眼用フレネルレンズをバイブレータモーターとギアによる3段式自動伸縮装置によって各自の視度に合わせた位置に前進移動させ、且つ固定できるようにし、また使用後は液晶モニターの中に収縮できるもので、もって運転中の安全性及び快適性を図ったものである。

#### [0005]

#### 【考案の実施の形態】

図1の5モニター本体の6のパワースイッチをONにする。次に1ズームスイッチ(+)を押すと、押している間は図3の9バイブレーターモーターが回転し、

12のクランク軸から10ギアA、11ギアBを作動させて7の3段伸長棒を伸ばしていく。この3段伸長棒は車の振動でぶれないよう3フレネルレンズ枠の四隅に連動性をもって固定されている。老眼のドライバーの補正視度に合わせて8液晶画面上の文字や図を一番よく見える位置まで4フレネルレンズが前に移動した時にズームスイッチを押すのを止める。そこでフレネルレンズ枠は固定される。視度調節の微調整を繰り返す場合はズームスイッチ(+)と2ズームスイッチ(一)を交互に押しながら適切な位置を決定する。なお3段伸長棒は1段目の長さがモニター本体の奥行きの寸法を目安とし、1段目の中に2段目、2段目の中に3段目の伸長棒が仕組まれているため、最大伸長はモニター本体の奥行きの4倍の長さまで確保出来るようになっている。

カーナビゲーションの使用を止めるためパワースイッチを切ると連動して自動的 に3段伸長棒はモニター本体の中に収まり、液晶画面とフレネルレンズが直接接 触しないように13ゴムがフレネルレンズ枠の四隅に設けられている。

## [0006]

## 【考案の効果】

軽度あるいは強度の視度に係わらず老眼の人が遠近両用眼鏡を使用しなくてもカーナビゲーションを活用出来るようになり、運転中の快適さは勿論のこと、飛躍的に運転中の安全性が向上した。